# **T**est

### **A**dministration

**D**irections



January 29, 2015



#### **AMP IT UP DAY! TEST ADMINISTRATION DIRECTIONS**

This document is a step-by-step guide for educators who will be administering the AMP It Up! Day practice test to students on January 29, 2015. This may include teachers, paraprofessionals, aides, or other district employees.

#### **Table of Contents**

AMP IT UP! DAY OVERVIEW	3
AMP IT UP! DAY TEST SPECIAL CONSIDERATIONS	
THE PNP, TESTLETS, & AMP IT UP DAY	
AMP IT UP! DAY — JANUARY 29 - RESPONSIBILITIES	
TEACHER CHECKLIST	6
TEST ADMINISTRATOR CHECKLIST	6
STUDENT CHECKLIST	6
AMP IT UP! DAY TEST ADMINISTRATION DIRECTIONS	
VISUALS OF AMP TOOLS AND SCREENS FOR TEACHER REFERENCE	15
GRADE LEVEL / ITEM	20
TEST ROOM POSTER	21
REVIEW SCREEN	22
MAC / PC KITE CLIENT	23
IPAD KITE CLIENT	24
CHROMEBOOKS KITE CLIENT	25
AMP IT UP! DAY HELP	26
AMP EDUCATOR RESOURCES	27
Answer Keys	28

#### **AMP IT UP! DAY OVERVIEW**

On AMP It Up! Day, schools in Alaska will work together with the Achievement and Assessment Institute (AAI) to simulate computer-based summative testing conditions for one day. The simulation will provide information on each building's internet connectivity and the performance of AAI servers.

Additionally, AMP It Up! Day will allow building personnel to practice summative testing procedures such as prepping devices, scheduling test sessions, printing tickets, troubleshooting problems, and getting support from the AAI Help Desk. The experience will help everyone prepare for the opening of the computer-based assessment window on March 30, 2015.

The purpose of AMP It Up! Day is to evaluate the performance of the technology. Therefore, the following unique circumstances apply to AMP It Up! Day Tests:

- Tests used on AMP It Up! Day include the same items as the technology practice tests currently available. These short tests include a high percentage of technology-enhanced items, which require more bandwidth.
- Scores will not be reported back to students or teachers. However, answer pages are provided to teachers to use with students.
- To simulate maximum bandwidth use, text-to-speech audio will be automatically enabled for <u>all</u> students on AMP It Up! Day only. (For the spring summative assessment, text-to-speech will be available only to students with a documented need who have the accommodation selected in their Personal Needs Profile).
- Teachers and students are encouraged to talk about the test questions and to try out all the tools while taking the test.

Alaska Measures of Progress, or AMP, is Alaska's new custom assessment. It measures students' mastery of the Alaska English Language Arts and Mathematics Standards adopted in 2012. The AMP assessment replaces the SBAs and will be administered for the first time this spring.

The Achievement and Assessment Institute (AAI) based at the University of Kansas is the test developer for the AMP assessments. http://akassessments.org/

For more information on AMP, select the purple star on the Alaska Department of Education homepage. http://education.alaska.gov/

#### **AMP IT UP! DAY TEST SPECIAL CONSIDERATIONS**

- Teachers, paraprofessionals, or other school staff may act as the test administrator/proctor for the AMP It Up! Day assessment. (For the summative AMP assessment the test administrator/proctor must be a trained district employee.)
- Students should take the AMP It Up! Day tests on the same devices they use for instruction and that will be used for the summative AMP assessment.
- Students should be encouraged to try out all the tools, including playing the audio for test items, in order to maximize bandwidth load. This requires students to have headphones or earbuds (students can bring their own).
- The basic four-function calculator will be available on the AMP It Up! Day tests for grades 6-10.
   The TI 30XS scientific calculator will be available for grades 6-8 and the TI-84 graphing calculator will be available for grades 9-10.
- This is not a secure assessment. EED encourages teachers to discuss the technology and the items with students as they take the AMP It Up! Day tests.
- The directions on the AMP It Up! Day test, on the first page and for each item, are longer than they will be for the summative assessment. This is because the directions include information about the technology on this assessment. On the summative these directions will be accessed as needed by selecting the question mark icon.

#### THE PNP, TESTLETS, & AMP IT UP DAY

In an effort to test maximum bandwidth use, text-to-speech audio will be automatically enabled for all students on AMP It Up! Day. Just before AMP It Up! Day, AAI will save all PNP data and then temporarily change all PNPs to allow text-to-speech audio during the test. After AMP It Up! Day, AAI will return all PNPs to their existing settings.

Districts should not make changes to any student's PNP during the week of January 26-31, 2015. Any changes made to PNPs during this week will not be saved. Additionally, EED strongly recommends that teachers do not access the formative testlets during this week, as students' PNP settings will not be personalized.

#### AMP IT UP! DAY - JANUARY 29 - RESPONSIBILITIES

Person responsible	Tasks	Notes
Building test coordinator	<ul> <li>Provide the AMP It Up! Day Schedule</li> <li>Ensure all test administrators have tickets for test sessions</li> <li>Be available to assist with any issues.</li> </ul>	
Building test coordinator and/or building technology coordinator	<ul> <li>Prepare the computer testing room</li> <li>Check that all monitors, mice, headphones, etc. are available and in working order</li> <li>Set the volume on devices prior to launching the KITE test engine</li> <li>Post AMP It Up! Day testing sign</li> <li>Post local support contact information and AMP Help Desk information</li> </ul>	EED recommends all students use earbuds or headphones. If allowed locally, students may use their own. If headphones are not being used, the device volume should be set on mute prior to launching the KITE test engine.
Test administrator	<ul> <li>Follow instructions in the AMP It Up! Day Test Administration Directions (TAD).</li> <li>Assist students with understanding how to use the tools and answer the technology-enhanced items.</li> </ul>	Teachers, paraprofessionals, or other school staff may act as the test administrator/proctor for the AMP It Up! Day Assessment. (For the summative AMP assessment, the test administrator/proctor must be a trained district employee.)
Building test coordinator and/or building technology coordinator	Assist test administrators in solving any problems that occur.	Follow district problem escalation procedures if issues occur while testing. When necessary, building and district test coordinators should contact the AMP Help Desk at <a href="mailto:amp_support@ku.edu">amp_support@ku.edu</a> or toll free 855.277.9752.

It is important to report all problems encountered to the AMP Help Desk so that solutions can be found before the computer-based assessment window opens at the end of March.

Possible issues include difficulty with logins, tests loading slowly or improperly, or disconnections from the AAI servers. AMP Technical Support will be able to determine whether the problem is related to AAI servers, local bandwidth, firewalls, or other sources.

#### **TEACHER CHECKLIST**

#### BEFORE AMP IT UP! DAY ☐ Log in to the KITE test engine and take the Technology Practice Test for your grade level. ☐ Talk with students about the AMP It Up! Day tests before January 29. ☐ IMPORTANT: Show students the AMP Tutorials so that they understand how to use the AMP Universal Tools. The four AMP tutorials are available at (http://education.alaska.gov/akassessments/#c3gtabs-amp See #5) **TEST ADMINISTRATOR CHECKLIST** BEFORE AMP IT UP! DAY ☐ Read through AMP It Up! Day Test Administration Directions prior to January 29. ☐ Review the answers to the questions on the test(s) your students will be taking. ☐ Ask your building test coordinator about procedures for reporting problems and getting help. ☐ Check on the testing schedule for your group. ☐ Ensure that you have tickets for all students in your group. Optional: highlight the username and password on each ticket. This may be helpful for younger students who are unfamiliar with the process of logging in to a program. ☐ Decide how you might interact with students while they participate in the AMP It Up! Day tests: The test will not provide students with feedback on whether their answer is correct. How might you provide this feedback to students? o Will you allow students to help each other use technology and/or answer questions? ON AMP IT UP! DAY ☐ Bring your tickets and this TAD to your test session. ☐ Check that the testing room and devices (and all additional hardware like headphones and mice) are set up and in working order. ☐ Bring scratch paper and pencils for students to use. ☐ Set device volume PRIOR to opening the KITE Client. ☐ Encourage students to use all available tools during testing. Answer student questions and encourage students to help each other to learn the new test system. STUDENT CHECKLIST ☐ Bring headphones/earbuds so I can listen to the computer voice on the AMP It Up! Day tests. ☐ Watch the AMP Tool Tutorials so I know how the tools work. ☐ Ask my teacher for help when I'm confused.

☐ Remember this is a practice test and I'm helping my school get ready.

☐ Try out all the tools!

#### **AMP IT UP! DAY TEST ADMINISTRATION DIRECTIONS**

Note: text in [brackets] is optional or applies to specific devices/circumstances.

- 1. Post the AMP It Up! Day Testing poster on the door of the testing room.
- 2. Have students take their seats at their computers [hand out devices].
- 3. SAY

Today we are going to take a practice test that helps you and our school get ready for the new test at the end of the year. This test will not be scored and it doesn't count for your grade. It is just for practice.

[I need to tell you a lot of directions. Please keep your hands off your computer/tablet until I tell you it is okay to begin. Sometimes you may need to wait for everyone to finish a task. Please keep your hands off your computer until we are all ready.]

The practice test you are going to take is for grades [3-5; 6-8; 9-10]. Some of the questions might be hard for you and some of them might be easy. Because this is a practice test I can help you figure out the answer [or you can ask your neighbor for help].

This special practice test has all the Universal Tools we talked about in the classroom. It also has a special tool that reads the questions and answer choices to you. I'd like you to listen to as many of the items as you can so we can see how well that tool works.

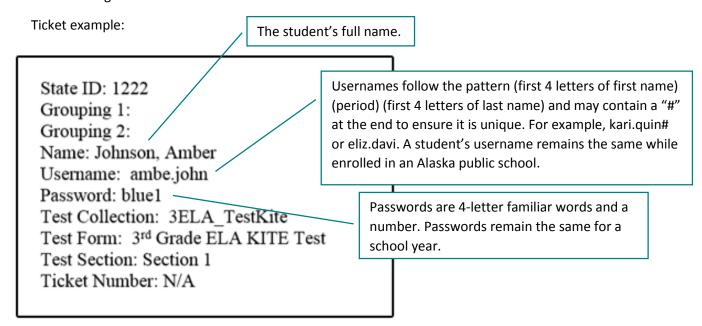
First I will pass out your test ticket. Next we will all open the KITE Client and log in to the test. Then we will read the directions together before you begin testing.

First, please make sure that your headphones [earbuds] are plugged into your [computer; tablet]. Set the volume at a level that is comfortable to you. You will not be able to change the volume after you begin the test.

Check to be sure that students have successfully adjusted the volume.

Each of you will have one ticket. When I hand you your ticket, please find your username and your password. [Carefully circle your username and password].

Pass out the tickets. [note: you may want to highlight the username and password for students prior to the testing session.



#### 5. SAY

Open the KITE Client on your [computer; tablet]. It looks like this [hold up picture of icon; see tools in back of TAD for full size images]. [Double click; Tap] on the icon to open it.



You will see a red and blue box that says KITE and "Welcome Back" at the top with a space to type your username and your password.

Please type in your username. [This is not the same as your name. Your username is part of your last name and part of your first name; you might also have a number. Find the line on your ticket that says "username."]

Please type in your password. [Your password is a short word plus a number.]

Do not use capital letters.

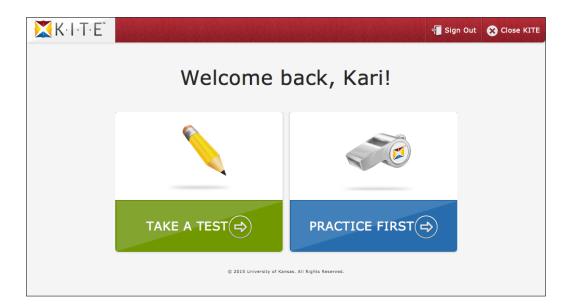
After you enter your username and password select "sign in." Then stop and wait for the class.

Please raise your hand if you try and are having trouble. [Help your neighbor if they are having trouble. Please remember that helping means you tell them how to do something; do not do it for your neighbor. We want everyone to have a chance to practice.]

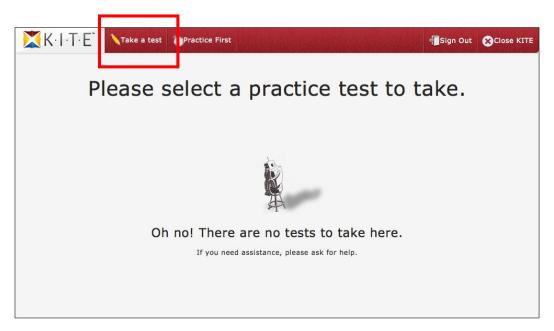


After you select "sign in" you will see a screen that says "Welcome back" and your first name.

Select the green "Take a Test" button.

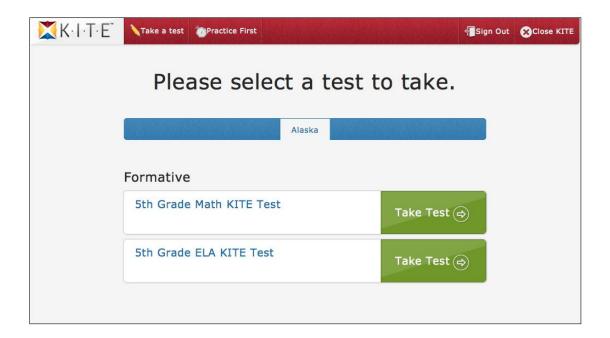


NOTE: If a student selects the blue Practice First button they will see this screen. Tell the student to select the Take a Test button in the top left corner.

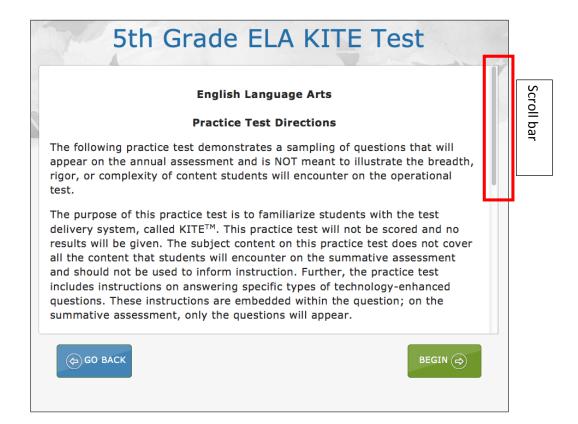


After you select "Take a Test" you will see a screen that asks you to select a test to take. You may have 2 or more tests listed there.

Select the green "Take a Test" button for the [math; ELA] KITE test.



The first page you will see is the Practice Test Directions. Some of these directions are written for teachers. The important information you need to know is on the bottom half of the page. Scroll down until you see Test Overview. I'll read these directions aloud to you.



#### First half of directions. DO NOT READ.

#### **English Language Arts Practice Test Directions**

The following practice test demonstrates a sampling of questions that will appear on the annual Assessment and is NOT meant to illustrate the breadth, rigor, or complexity of content students will encounter on the operational test.

The purpose of this practice test is to familiarize students with the test delivery system, called KITE<sup>TM</sup>. This practice test will not be scored and no results will be given. The subject content on this practice test does not cover all the content that students will encounter on the summative assessment and should not be used to inform instruction. Further, the practice test includes instructions on answering specific types of technology-enhanced questions. These instructions are embedded within the question; on the summative assessment, only the questions will appear.

#### Second half of directions, RFAD TO STUDENTS

#### **TEST OVERVIEW**

This test has questions in several formats. For example, you may be asked to move something on the screen or to choose a word or phrase from a sentence or paragraph. You may be asked to choose one or more answer choices from a list. You might have to scroll to see the rest of a passage, question, or answer choice.

#### **GENERAL DIRECTIONS**

To flag a question for review, select the flag icon next to the question.

View another question by selecting **Next** or **Back** at the bottom of the screen or by selecting the specific **question number** at the top of the screen. You may review your answers or return to a previous question within the same part.

The question status bar at the top of the screen shows unanswered questions in gray, questions you have already answered in green, and questions you have flagged for review in blue.

If needed, use the tools on the left side of the screen to help answer questions.

Select the green "Begin" button on the Directions Page.

You will now see the first question on your screen.

The Tool Bar is on the left side of your screen. The Navigation Bar is at the top of your screen.

The directions at the top tell you how to answer the question. The question is below these directions.

#### Remember:

Try out all the tools that are in the tool bar on the left side of your screen. It is okay to click on it to see what it does.

This test is just for practice. You can ask for help.

The green triangle at the bottom of the screen is the "play" button for the recorded sound. Once you have your headphones on you can select that button to listen to the computer read the test question to you.

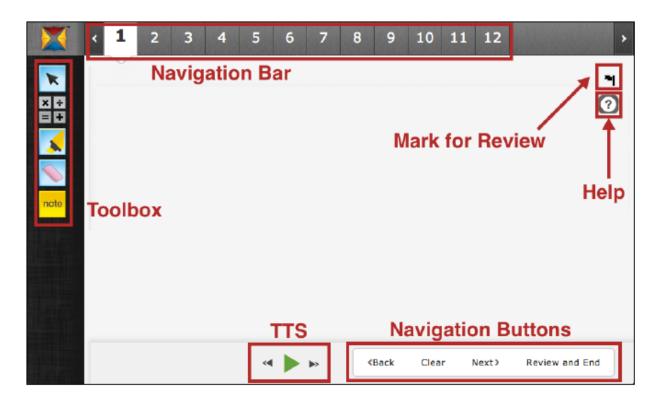
When you answer a question the navigation bar at the top of your screen will turn the number of that question GREEN with a CHECK MARK. This means you selected an answer. It does NOT mean that you got it right. The test does not tell you if you answered a question right or wrong. I have the answers to the questions and can tell you if you answered it correctly.

When you are have answered all the questions you will see the Review Screen. Raise your hand when you get there. It looks like this. [Hold up poster of review and end screen in teacher resources section.]

#### VISUALS OF AMP TOOLS AND SCREENS FOR TEACHER REFERENCE

**Test Screen:** The Item will be in the center of this screen.

NOTE: for the AMP It Up Day! Test the technology directions are included above every item. For the Summative assessment in April the technology directions will be accessed by selecting the help icon.

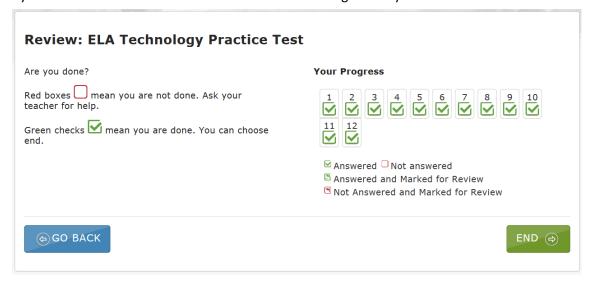


**Navigation Bar:** This is at the top of the screen. A green box with a check indicates that the student has provided an answer. It does NOT indicate that the answer is correct.

The blue box with a flag indicates that the student has flagged that item to return to it. If the student leaves the item flagged it will still be scored.

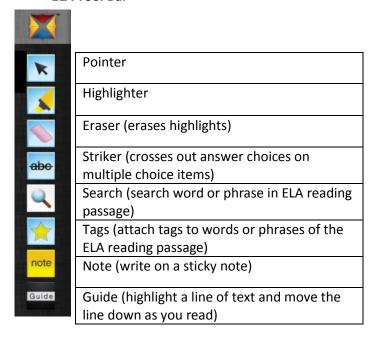


**Review Screen:** Students will see this screen when they have answered all the questions and/or when they select the "review and end" button on the bottom right of any item.



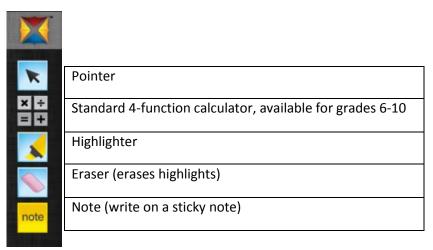
**Universal Tools:** these tools are available to all students.

#### **ELA Tool Bar**





#### **Math Tool Bar**





TI-30XS Scientific Calculator Icon for grades 6-8



TI-84 Plus Graphing Calculator Icon for grades 9-10

Calculators available for students, by grade level..

**Grades 6-8** 







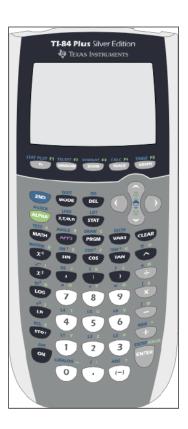


Grades 9-10









#### **Teacher Resources TOC**

- 1. Grade levels for each item on the practice tests
- 2. Poster for Testing Room
- 3. Review Screen Poster
- 4. KITE Client Icon Posters
- 5. Contact Information for AMP It Up Day Poster
- 6. AMP Educator Resources
- 7. Answers for the practice test items.
  - a. Elementary School (grades 3-5)
  - b. Middle School (grades 6-8)
  - c. High School (grades 9-10)

#### **G**RADE **L**EVEL / **I**TEM

#### MATH

#### **Math Elementary School**

- 1. Grade 3
- 2. Grade 3
- 3. Grade 4
- 4. Grade 3
- 5. Grade 4
- 6. Grade 4
- 7. Grade 3
- 8. Grade 4
- 9. Grade 5
- 10. Grade 3
- 11. Grade 4
- 12. Grade 3
- 13. Grade 3
- is. Grades
- 14. Grade 3
- 15. Grade 3
- 16. Grade 4
- 17. Grade 4
- 18. Grade 4
- 19. Grade 4

#### **Math Middle School**

- 1. Grade 6
- 2. Grade 6
- 3. Grade 6
- 4. Grade 8
- 5. Grade 6
- J. Grade o
- 6. Grade 67. Grade 6
- \_

- 9. Grade 6
- 10. Grade 6

Grade 6

- 11. Grade 6
- 12. Grade 6
- 13. Grade 6
- 14. Grade 6
- 15. Grade 6
- 16. Grade 6
- 17. Grade 6
- 18. Grade 6
- 19. Grade 6

#### **Math High School**

- 1. Grade 8
- 2. Grade 8
- 3. Grade 8
- 4. Grade 6
- 5. Grade 8
- 6. Grade 97. Grade 8
- 8. Grade 8
- o. Grade c

9.

Grade 8

- 10. Grade 8
- 10. Grade o
- 11. Grade 7
- 12. Grade 813. Grade 9
- 44 0 1 0
- 14. Grade 9
- 15. Grade 10
- 16. Grade 9
- 17. Grade 9
- 18. Grade 9

#### **English language arts (ELA)**

#### **ELA Elementary School**

- 1. Grade 3
- 2. Grade 3
- 3. Grade 3
- 4. Grade 3
- 5. Grade 3
- 6. Grade 3
- 7. Grade 3
- 8. Grade 3
- 9. Grade 3
- 10. Grade 3
- 11. Grade 3
- 12. Grade 3

#### **ELA Middle School**

- .. Grade 6
- 2. Grade 6
- 3. Grade 6
- 4. Grade 6
- 5. Grade 6
- 6. Grade 6
- 7. Grade 6
- 8. Grade 6
- 9. Grade 6
- 10. Grade 6
- 11. Grade 6
- II. Graue C
- 12. Grade 6

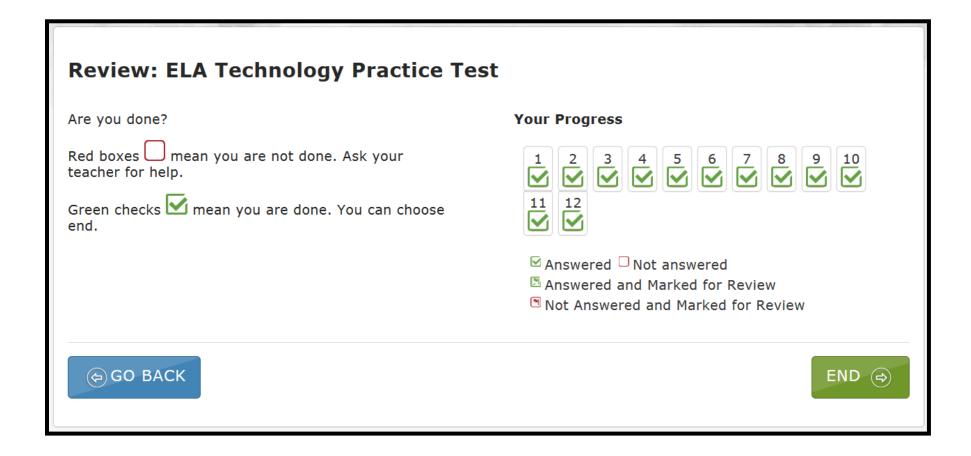
#### **ELA High School**

- 1. Grade 9
- 2. Grade 9
- 3. Grade 9
- 4. Grade 9
- 5. Grade 9
- 6. Grade 9
- 7. Grade 9
- 8. Grade 9
- 9. Grade 9
- 10. Grade 9
- 11. Grade 9
- 12. Grade 9
- 13. Grade 9
- 14. Grade 9
- 15. Grade 9
- 16. Grade 917. Grade 9



# AMP It Up! Day testing happening in this room!

#### **REVIEW SCREEN**



#### MAC / PC KITE CLIENT



#### IPAD KITE CLIENT



#### **CHROMEBOOKS KITE CLIENT**





# My district's contact info for getting help with AMP:

Technology director:
Building test coordinator:
District test coordinator:
Other:

AMP Help Desk

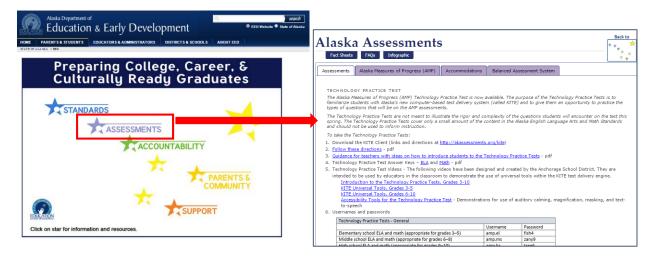
Toll free: 1-855-277-9752

Amp support@ku.edu

#### **AMP EDUCATOR RESOURCES**

Where to find more information on AMP:

Purple Star on EED Homepage - <a href="http://education.alaska.gov/akassessments/#c3gtabs-amp">http://education.alaska.gov/akassessments/#c3gtabs-amp</a>
Teacher resources, timelines, video tutorials, brochures, etc.



AAI AMP Website - http://akassessments.org/

Manuals for Educator Portal, video tutorials, sign up to be involved, etc.



# AMP It Up! Day Answer Keys

## **Elementary School English Language Arts**

1.

Over many weeks of practice, Suri became great friends with Marlena. They would go to each other's house to play. Both girls' wished they go to the same school.

2.

Hermit crabs are funky animals! They do not live in shells they grew themselves. Instead, they find old shells and live in them. When they grow bigger they move to another, bigger shell.

3.

Fact		
There are over 300 animals at the zoo.		
People can ride a train to tour the zoo.		
Opinion		
The zoo is the best place to go for bird-watching.		
Riding the train is a fun activity for everyone.		

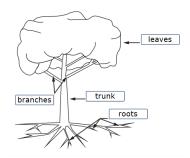
4.

Meeting new people can be scary. You may not be sure what to do. You could be feeling shy, but you should try to make friends. They will be glad to help you. Soon, your fears will disappear.

5.

Rosa Bonheur lived in France and painted - horses.

6.



"Claire, may I talk to you for a minute?" Coach Lydia asked.
"Of course," exclaimed Claire as she walked over to her coach.
"You are doing a wonderful job at gymnastics," said Coach Lydia.
"Thank you," smiled Claire.

- 8. D: Two-toed sloths and three-toed sloths are interesting animals.
- 9. C: Their arms are much longer than their legs.
- 10. A,E: the food they eat; how slow they move
- 11. A: mix
- 12. C: to help the reader find information about three-toed and two-toed sloths

# Elementary School Math

1.

Day 2	Day 1	Day 3

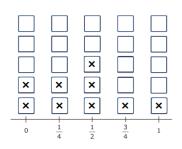
2.

Round Up
35
46
89
89
Round Down
Round Down
14

3.

1/2	=	<u>2</u> 4
1/2	>	1/4
1/2	<	<u>3</u>

4.

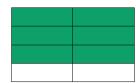


1 kilogram	60 seconds
1 minute	1000 grams
1 liter	1000 milliliters
	1000 feet

6.

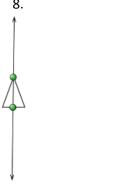
7. Here are three ways to shade ¾.

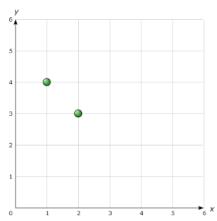






8.

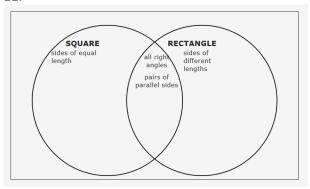




10.

	True	False
$\frac{2}{3}$ is equivalent to $\frac{3}{2}$	0	⊗
1 is equivalent to $\frac{3}{3}$	⊗	0
$\frac{3}{6}$ is equivalent to $\frac{1}{2}$	⊗	0
2 is equivalent to $\frac{6}{6}$	0	⊗

11.



12.

What is 5 + 7 - 6? Enter your answer in the box.

6

13. A, C, E: Rectangle; Square; Rhombus

14. B: 4 + 4+ 4 + 4 + 4

15. C: 20 ÷ 2 = 10

16. B: 23 pieces

17. B: 12 days

18. B: 9 pencils

19. C: 48 ounces

#### Middle School English Language Arts

1.

Astronauts have to where special clothing in outer space to protect them. Humans could not normally survive in an environment with no air pressure, no oxygen, and extreme temperatures. Space suits, however, are specially built to protect astronauts in that environment. Oxygen is piped in from a tank into the astronaut's mask, and the suit creates air pressure. Diffrent layers inside the suit protect the astronaut when it gets really hot or really cold.

2.

Heidi is one of my favorite books. It was written by the Swiss author Johanna Spyri. "On the Pasture" is an interesting chapter. It describes Heidis adventure to the pasture with Peter.

Fact

The world's population is growing at an estimated rate of 200,000 people a day.

Scientists believe that people are living longer mainly due to improved health care.

Opinion

This growth rate is too fast, and actions should be taken to decrease it.

Population growth can be a difficult issue to address because improved health care is a good idea.

4.

Polaris is a helpful • star because it never moves. It's • sometimes called the North Star because it is above • the North Pole. Travelers • who are lost can find their • way by looking at the North Star. • If you know which direction north is, you can find the other directions and go on your • way.

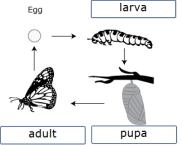
5.

The writer of "The Blue Flannel Shirt" is Edgar Guest. Edgar Guest was born in Birmingham, England, in 1881. Later, • he moved to the United States with his family. He wrote his first poem in December of 1898. When Edgar Guest was older, • he became known as the People's Poet because he was so popular.

Then, • he became even more well known when he hosted a radio show in Detroit from 1931 to 1942. It is estimated that he wrote as many as 11,000 poems.

6.

#### Life Cycle of a Butterfly



7.

Goats are amazing animals.

They provide milk, meat, hair, and skins.

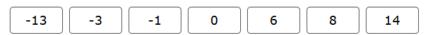
Furthermore, goats are one of the oldest domesticated animals.

This means humans raised them to live with humans instead of in the wild.

- 8. C: Jane Addams helped the poor and women.
- 9. A: people who move
- 10. C: It shows how Jane Addams helped individual people.
- 11. C: "She was a vice president of the National American Woman Suffrage Association."
- 12. B, C: to help the reader relate to Addams; to connect the information to the reader's life

# Middle School Math

1.



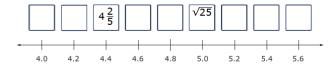
2.

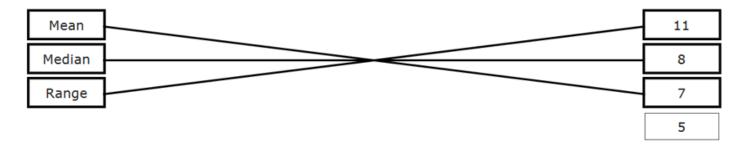
Area		
$\frac{\frac{1}{2} \cdot (base \cdot height)}{length \cdot height}$		
Perimeter		
2 · (length + height)		
4 · (length)		
sum of all sides		

3.

Expression	Value
$\frac{1}{6} + \frac{2}{3}$	Less than 1
$\frac{3}{2} - \frac{2}{3}$	Less than 1
$\frac{4}{6} \cdot \frac{3}{2}$	Equal to 1
$\frac{3}{2} \div \frac{2}{3}$	More than 1

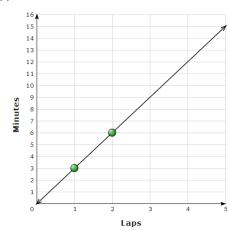
4.



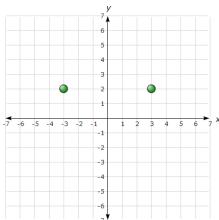


6.

7.

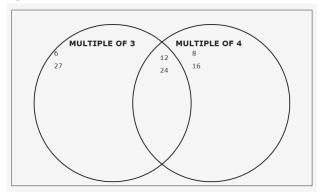


8.



	True	False
2  =  -2	⊗	0
4 + 1  =  -4 - 1	⊗	0
2  = - -2	0	⊗

10.



11.

What is the value of x in the equation 8 – x = 10? Enter your answer in the box.

12. B, C, D: Rhombus; Rectangle; Square

13. D: 
$$|-5| = 5$$

#### High School English Language Arts

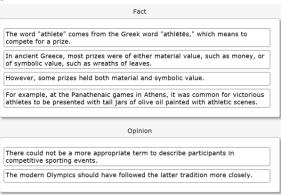
#### 1.

Contempary research has shown that some foods can inhance emotional states and make you feel good. For example, folic acid and vitamin B12 help to regulate one's moods. An example of a dish rich in both these "feel-good" compounds is chicken salad made with lettuce and lean chicken breast. Additionally, fruits and vegetables are high in antioxidants that can improve one's overall health. Antioxidants can also be minerals such as selenium, which works to diminish stress levels. Foods rich in selenium include beans, meat, dairy products, nuts, and seafood. Seafood, predominently fish, is rich in omega-3 fatty acids that can lower the risk of depression.

#### 2.

Jem and Scout were relieved to learn that Boo Radley would not be implicated or unjustly indicted in the unfortunate series of events that had occurred. Although they started off being fearful of Boos ghoulish and mysterious ways, in the end they perceived him as a Hero.

#### 3.

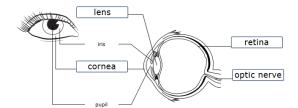


#### 4.

Light comprises both photons (light particles) and waves. During constructive interference, photons act as waves as they travel through space. When these waves are "in-phase" with each other (occur simultaneously), they combine or interfere with each other to become stronger. The additive effect of combined waves is typically perceived by the human eye as rippled or stripped splotches of light.

#### 5.

Famed American novelist John Steinbeck was born in 1902. Many fans are surprised to hear that Steinbeck never earned a college degree—he dropped out and worked as a manual laborer before he achieved any writing success. In fact , it took him until the age of 33 to reach financial independence through writing. Most of Steinbeck's works, including his landmark novel *The Grapes of Wrath*, were inspired by his own life experience. He earned a Pulitzer Prize for that novel, which was arguably his finest work, in 1939. Steinbeck's final, incomplete work was published posthumously in 1976. Incredibly , over half a million copies of Steinbeck's cherished works continue to sell each year.



7.

The era termed the Industrial Revolution is named according to the vast changes that occurred in England's agriculture, manufacture of textiles and metal, transportation, economic policy, and social structure.

Although "revolution" implies an abrupt change, the changes that occurred were actually quite gradual, occurring for a period of roughly 90 years.

It is generally agreed that this period began in the late 1700s, when home manufacturing using hand tools or basic machines gave way to specialized machines and mass production.

While a much-improved standard of living soon followed for a number of people, the poor and working classes still suffered.

For example, factory workers faced low wages and dangerous working conditions in addition to limited job security.

- 8. C, E: offered; provided
- 9. D: to be certain
- 10. D: The article generated public interest
- 11. D: He was accused of stealing.
- 12. B: At first, people think he is senseless; later, they think he is dishonest.
- 13. B: a set of claws
- 14. D, E: The viscid thread is comparable to rubber in elasticity, but has more strength. The dragline thread is comparable to steel and Kevlar® (bulletproof material) in stiffness, but is more elastic and able to absorb higher impact.
- 15. C: The reaction has nothing to do with the thread's exposure to air once it exits the spider; rather, scientists believe it has to do with the act of pulling on the thread that realigns the molecules into a solid form.
- 16. A: general information about spiders, specific kind of spider, spider webs and spider silk, scientific study of spider silk
- 17. D: grip

#### High School Math

1.

-1	√0	<b>√1</b>	$\sqrt{2}$	2	√5

2.

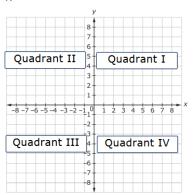
Rational Numbers
2/3
3.14
$3\sqrt{2}\cdot\sqrt{8}$
.7

Irrational Numbers

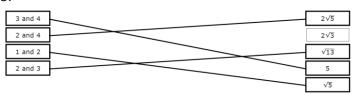
<u> </u>
ν2
${2}$
_

3.

1/3	Rational
<sup>3</sup> √6 + <sup>3</sup> √3	Irrational
√9	Rational
∜20 - ∜4	Irrational



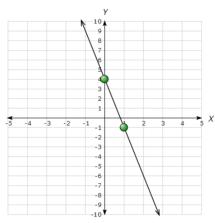
5.



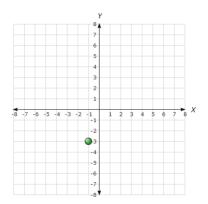
6.

The domain of the function is all real numbers • except 3 •.

7.

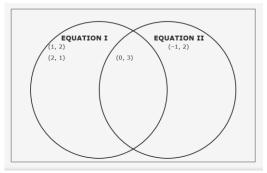


8.



	Rational	Irrational
3 5	⊗	0
√7	0	⊗
$2\sqrt{2} \cdot 3\sqrt{8}$	⊗	0
0.13	⊗	0

10.



11.

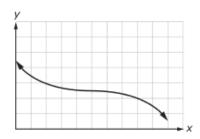
What is the value of m in the equation 2m - 5 = 9? Enter the answer in the box.

$$m = 7$$

12. A, C, F: (0, -6), (1, -2), (2,2)

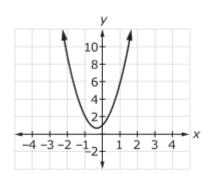
13. C: from noon to 1:00 p.m. and 2:00 p.m. to 3:00 p.m.

14. B

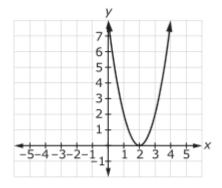


15. B:  $\frac{14}{3}$ 

16. A



#### 17. B



У

#### 18. D

